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Doing Double Duty 20

COVER STORY CIOs find it exhilarating to take on business functions outside of IT. Yet these CIO-plus roles require a new mindset and trusted deputies.

BY JULIA KING





FROM THE
EDITOR IN CHIEF

start

Double-Duty CIOs

A funny thing happened on the way to CIOs becoming strategic business leaders. Everybody, it seems, landed a second job along the way.

In the past few months, I've talked with many CIOs who are also chief digital officers, chief process officers, chief operating officers or senior vice presidents of various business functions. Their day jobs include activities like leading mergers and acquisitions, or managing supply chains, or developing new products and services, or running global operations.

I'm always suitably impressed (and more than a little amazed) by the expanding workloads these CIO-plus executives are carrying.

But I'm often left wondering how they do it all without having a nervous breakdown.

This month's cover story ("Doing Double Duty," page 20) not only answers my question about the mental health prospects of CIO-plus execs, it also reveals why this trend is thriving and expanding.

"IT already is related to every single part of a business," writes Julia King, a CIO contributing editor. That horizontal, helicopter-view of business processes gives IT leaders the opportunity to "more readily identify business stumbling blocks and innovate process improvements that increase business value."

The key word there is *opportunity*. The CIOs who step up for double duty are rarely drafted into these roles. They volunteer.

That's what Elizabeth Hackenson of AES did when she approached her CEO about taking on bigger challenges. Now CIO and senior vice president of technology and services, she oversees IT, cybersecurity, corporate services, internal audit, a global insurance group and a new energy business that includes a rooftop solar company. Whew. "A lot of what's been moved under me is stuff where you need strong relationships rather than command and control," Hackenson says. "It's more about influence."

Our story delves into the details of how CIOs manage these expanded roles, which require trusted deputies, high-performing teams and plenty of mentoring. They also broaden the career horizons of the IT group.

Mike Capone, former CIO and head of product development at ADP, noticed how his dual role paved the way for greater talent migration from IT into product development. As IT blends more deeply with business, he says, "CIO is no longer a destination job."

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
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CHATTER

Browsers, Not Buyers

Mobile devices are effective for browsing online, and **social media** can help consumers learn more about products, but these digital tools **don't generally lead to purchases**. In a Synchrony Financial survey of 6,700 shoppers, 45 percent of the respondents said they perform shopping-related tasks via mobile devices, up 4 percent since last year, but **only 18 percent** of browsers went on to purchase a product using a mobile device. Of the respondents who are social media users, **only 30 percent** said they have made a purchase after seeing a product on a social channel, up 4 percent from 2014. www.cio.com/article/2951466/

Interoperability Lacking

Healthcare IT executives recently told Congress that **vendors of electronic health record (EHR) systems** use proprietary standards and deceptive strategies to lock users into their products and keep systems from communicating with one another. "The biggest challenge we face is **liberating patient data from EHR systems** to make it interoperable," testified David Kendrick, chair of the Department of Medical Informatics at the University of Oklahoma. www.cio.com/article/2952402/

Apple Disappoints CIOs

Apple is slowly wading into enterprise IT waters, but the company gives **preferential treatment** to big corporations that have contracts with its partner, IBM. CIOs also say the initial fruit of that partnership, AppleCare for Enterprise, mostly disappoints. Apple is **"immature in their process** and evolution of working with a business," says Stuart Appley, CIO of real estate firm Shorenstein. www.cio.com/article/2951872/

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Doing More for Society can Boost Business Benefits

WITH MORE DATA ANALYSIS, can your enterprise make better decisions and increase revenues? No question about it. But with better insight from more data analysis, can your enterprise extend its reach to improve society, too? The two concepts are neither mutually exclusive nor farfetched.

According to a recent IDG Research Services survey, the idea of "Social Innovation" — using technology to improve not only revenues but society as well — is gaining significant traction. Enterprises are exhibiting a high level of interest in something that isn't entirely financially motivated for one simple reason: the world is more interconnected and interdependent than ever before. Organizations are starting to see more value in reaching outside their immediate environment for better perspectives, and using those insights for both financial and altruistic pursuits.

That may not be business as usual, but societal trends now have a greater influence on organizations than ever before. As the *Harvard Business Review* once noted, "seeking legitimacy or public approval by aligning corporate objectives with social values has become a business imperative."



Business Decisions/Practices Align with Belief, "Doing More for Society is Ultimately Good for Business"



17%

Extremely well



43%

Very well



34%

Somewhat

Most of the survey respondents agree with this view, both personally and professionally. Some 60% of respondents report their organizations' business decisions align with the belief that "doing more for society is ultimately good for business," and these results are consistent across multiple industries.

When the survey linked technological capabilities to Social Innovation, the results were equally emphatic. In the healthcare industry, organizations want to use social innovation to improve the level of personalized care, reduce healthcare costs, and improve patient satisfaction. For instance, wearable or remote devices transmitting patient information can mean fewer visits to hospitals and clinics, and thus can lower costs.

In the public sector, respondents are interested in increasing collaboration among departments, improving public safety and security, and building a more efficient societal infrastructure. For instance, public safety organizations can't afford to install security cameras everywhere, but with the ability to collaboratively tie into private organizations' security cameras, first responders can react more quickly to solve crimes and prevent incidents.

Interest exists even in industries that might be considered unlikely entities, such as banking. Consider the possibilities of using both account-holder and third-party data to identify on a more granular basis which neighborhoods are ripe with investment potential, thereby opening up lending opportunities to customers in lower socioeconomic ranks.

Getting Started With Social Innovation

To move forward, organizations need to understand the obstacles that could impede their progress, whether it's gathering resources for new analytics solutions, the cost of new services and expertise, or data integration. Organizations want to find partners with experience in critical areas, citing expertise in analytics and systems integration as most important. Other criteria cited as important: data management expertise and industry/operational expertise.

But the most important characteristic is the desire to intertwine efforts to boost revenues and increase Social Innovation efforts. And as long as organizations understand that they can do both without adversely affecting one or the other, their efforts will be rewarded.

FROM THE **CEO**

A.I. Ethics Emerge

Growing up, it was great fun watching shows like *Star Trek*, *The Jetsons*, *Flash Gordon* and *The Green Hornet*. They made you dream about what life would be like with amazing technologies at your disposal.

Now we're all grown up and actually using some of the once-imaginary marvels from those TV shows (except for George Jetson's flying car, which I'm still waiting for!).

On a recent overseas trip, I watched the new British sci-fi film *Ex Machina*, which tells the story of a programmer pushing the boundaries of artificial intelligence with a robot named Ava. Not long after that, I read about Elon Musk, Stephen Hawking and thousands of A.I. researchers calling for a ban on autonomous weapons, a.k.a. 'killer robots.'

While some people scoff at such warnings, we need to remember that humans think in linear rather than exponential terms. That's the primary reason Moore's Law continues to outperform itself. It's also why we should expect the rate of technology evolution to outpace that of human evolution.

Another compelling addition to this burgeoning debate is the open letter from the Future of Life Institute, in which A.I. scientists emphasize the importance of using A.I. for societal benefit, not destruction and war. Let's use artificial intelligence to eradicate disease and poverty, the letter argues, and "reap its benefits while avoiding potential pitfalls." Coupled with that letter, Musk made a \$10 million donation aimed at keeping A.I. "beneficial for humanity."

All of this puts the question of A.I. ethics on the table, at exactly the right moment. Why play the ethics card so early, before some of the imagined benefits have even materialized? Stuart Russell, a pioneering A.I. researcher, worries that this technology will be exploited for military use rather than human advancement. He and other scientists compare the potential of A.I. with that of nuclear technology, reminding us that the original, primary interest in nuclear reactions was as an "inexhaustible supply of energy." Not bombs. As Hawking said: "I think there is a reasonable analogy between unlimited amounts of energy and unlimited amounts of intelligence. Both seem wonderful until one thinks of the possible risks."

When so many of the world's smartest people raise their hands to warn us, we should not only hear them but heed them. As we contemplate the future of artificial intelligence, let's keep a strong grip on our ethics.

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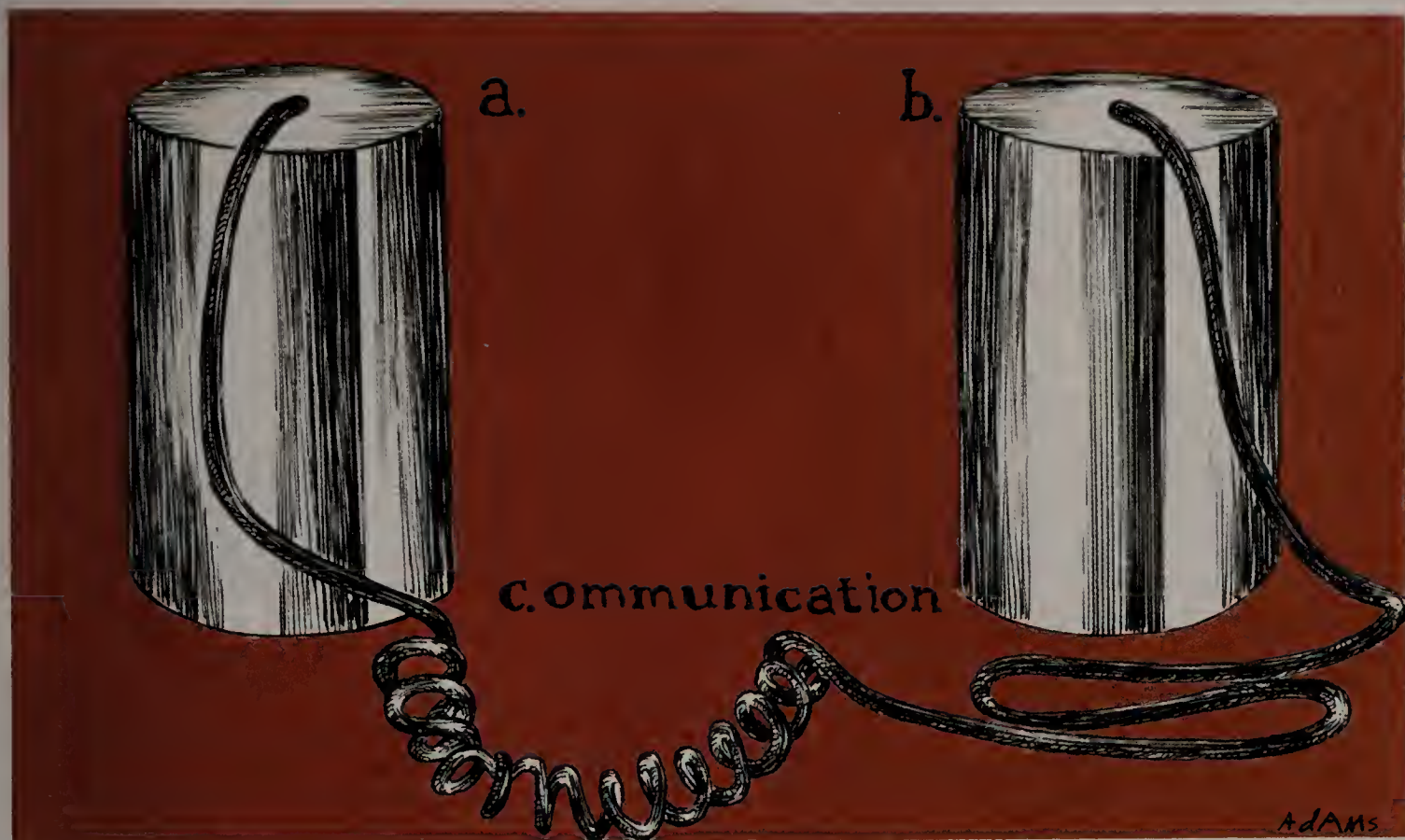
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IT in Plain English

Bringing a professional communicator into your department can build business credibility **BY BETH STACKPOLE**

EMC recently experienced a minor data center outage caused by a lightning strike. Episodes like that used to result in aggravated users pointing fingers at the IT department, which, while often quick to solve the problem, was not always adept at communicating its plan.

This time it was a different story. Under direction from Patrick Cooley, senior manager of IT marketing and communications, the CIO's office sent an email that explained the problem and the steps IT would take to avoid a repeat performance.

"We were able to communicate what was happening, why the disaster recovery plan didn't work, and what the impact was to the business," says Vic Bhagat, CIO at EMC, a \$24.4 billion company with 70,000 employees. "But we also communicated how we would use this event as a learning experience. I wouldn't have thought of that from an IT perspective. I would have been more defensive."

Bhagat and a small but growing number of CIOs are recognizing the value of having a dedicated communications specialist to help build and nurture the IT brand. In a recent CIO Executive ►►►

..... **\$2.2 trillion** In-store sales in 2015 influenced by consumers' digital activities (e.g., online research), up 15% over 2014. Deloitte Digital

►►► **IT in Plain English** Continued from page 9

Council survey, 80 percent of 202 IT leaders polled said that they rank building trust and credibility as high-priority goals, but only 4 percent said that they were highly satisfied with the effectiveness of IT's internal communication with business units. Half of the respondents said that a lack of communication talent holds their teams back.

"I need someone to help communicate and change the conversation I have with business and put things in business-enablement terms—not technical terms," Bhagat says. "We can't say, 'We built an AWS [cloud] capability, use ours,' we have to communicate to the business that we can provide a better connection in a secure way. I could build the best system out there, but if I'm unable to communicate the value to the business, it doesn't matter what I bring to the table—they'll go elsewhere."

Indeed, one reason for hiring an IT communications professional is that IT departments face stiff competition from external IT and cloud service providers. Another reason is to cut down on jargon-filled emails.

Cooley says he tailors messages to specific audiences. "People are constantly being bombarded with too much email that's too intrusive and too jargony," he says. "I can help look for ways to better leverage social media and target people with the best [communication] vehicle."

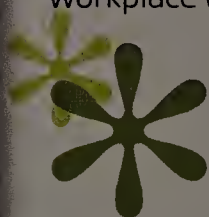
Jay Kerley, CIO at \$9 billion semiconductor equipment maker Applied Materials, says he's fully committed to having a dedicated IT communications specialist—specifically, Glaston Ford, his director of IT marketing—because it's not always easy to explain complex topics to various stakeholders, including the company's executives, its 14,000 employees, and external parties. "A professional communications role has the background and understanding to recognize all the stakeholders and be able to look at them through different sets of eyes," Kerley says. "The truth is what's important to me is not important to 90 percent of the rest of the population."

Beth Stackpole is a freelance writer based in Massachusetts.

crunch

AT WORK: SMART WATCHES & GLASSES

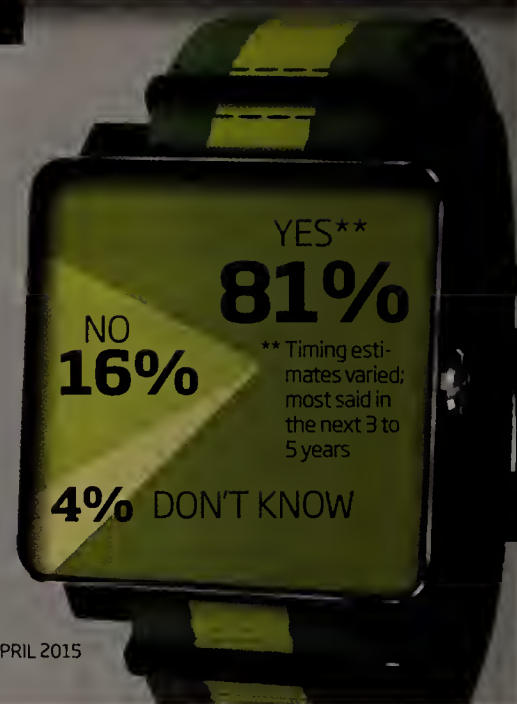
CIOs expect wearable tech, such as the Apple Watch or Google Glass, to become common in the workplace within five years.



Will wearable tech be a commonly used workplace tool?

Note: Percentages don't add to 100% because of rounding.

SOURCE: ROBERT HALF TECHNOLOGY SURVEY OF 2,400 CIOs, APRIL 2015



Wearables Get Federal Attention

Companies that use wearable computing devices as part of their workplace wellness programs may soon have to make room for another player: the federal government.

The U.S. Equal Employment Opportunity Commission (EEOC) has issued a proposed rule covering the privacy of the data that's collected from wearables in employee health programs. The EEOC distinguishes between simple health data—such as the number of steps a person takes each day—and medical data, such as a person's heart rate. For the latter, the EEOC proposal would require a higher level of data privacy.

Although the EEOC proposal doesn't mention specific products like a Fitbit, Jawbone or smartwatches, many such devices and fitness apps record a person's heart rate during a workout or over several workouts.

Some companies say the regulation, if adopted, could drive up costs and endanger their efforts to promote employee health. Iron Mountain, which has 1,600 workers using wearables to collect data for a wellness program, said it could be forced to scale back its initiative or kill it completely.

—Ken Mingis

..... **72%** Estimated portion of the U.S. workforce in 2020 that will be mobile workers (including telecommuters and field workers). IDC

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Cancer Society Gathers Donor Data

Mobile app for fundraising helps employees and volunteers accept credit card donations at events and learn more about donors **BY LAUREN BROUSELL**

NONPROFITS Charities depend on forming relationships with people who will volunteer their time and donate money again and again. But officials at the American Cancer Society (ACS) felt that slow processes and a lack of data about donors were resulting in missed opportunities.

In an effort to learn more about donors and make it easier for them to pay by credit card instead of cash or checks, the ACS rolled out an iOS mobile app for fundraising. (An Android version is in the works.) "The ultimate strategy here is to meet people where they want to give. We never want to leave a door closed," says CIO Jay Ferro.

Using the app, employees and volunteers can accept donations before and during ACS events by taking a photo to securely capture a credit card or check. The expedited payment

system allows the ACS to update an event's fundraising data in real time, so employees don't have to wait until checks are processed and data is entered into the system. "The [app's] back-end reconciliation is really not an issue," says Ferro. "It flows through the transaction system almost seamlessly."

The ACS IT department partnered with the charity's marketing, finance and innovation teams to develop a prototype of the app using the agile software-development methodology.

For the payment capabilities, the ACS used PayPal's credit-card scanning technology. Using the scanning capability of a smartphone camera, the user takes a photo of the front of a card or check, validating the number without storing it locally. The technology doesn't require add-ons like card swipers or dongles.

The app is also helping the ACS

learn more about its donors and volunteers by collecting data such as names, email addresses, social media accounts and events attended.

"The more you know about [donors], the more you can tailor your pitch to those individual people," says Alden Briscoe, executive vice president of Brakeley Briscoe, a management and fundraising consultancy for nonprofits. "The real goal is to turn one-time donors or initial donors into consistent donors."

The ACS says its fundraising app is the first of its kind in the nonprofit sector. Based on early results, the organization expects the app to reduce the cost and time for processing check donations, increase event revenue and reduce fundraising costs.

Lauren Brousell is a senior writer for CIO.com. Follow her on Twitter: @LBrousell.

Google Offers 'Buy' Button

RETAIL Google is rolling out a new service that lets users buy retail items directly from the search results page on mobile devices. The goal is to make mobile search more useful and give advertisers a new way to attract customers.

A new link reading "Buy on Google" will appear in the ads that show up after users search for certain retail items. Clicking on that link will take you to a retailer-branded product page, hosted by Google, where you can get more information about the product, like reviews, and select item quantities. A checkout button will let you enter and save payment information, and provide a shipping address, before placing the order.

Early testers of the feature include Under Armour, eBags and Staples.
-Zach Miners

IEEE Panel Seeks Wi-Fi Privacy

Wi-Fi An IEEE study group says the Wi-Fi protocol should be updated to use randomly generated addresses for better security and privacy.

The current 802.11 Wi-Fi standards were designed so that each mobile device gets its own unique media access control (MAC) address—which allows spies, criminals and advertisers to track mobile device users. "Because of the uniqueness of the identifier and the fact that they're not encrypted, you can easily make a connection between the identifier and the user," says Juan Carlos Zuniga, chair of the IEEE 802 Privacy Executive Committee Study Group.

Zuniga says he hopes his group's recommendations will be incorporated into the next version of the 802.11 standard, but that could take years. Until then, he says device manufacturers could proactively generate random identifiers, without waiting for the standard to catch up.
-Maria Korolov

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Making a Case for Security

A law firm handling sensitive documents uses its security certification as a competitive differentiator **BY MARY K. PRATT**

International law firm Shook, Hardy & Bacon touts more than its legal skills to current and potential clients: It also pitches its ability to protect sensitive client information from cyberattacks.

A key selling point is Shook's recently earned ISO 27001 certification for information security management. "We wanted to make sure we had the processes in place so [clients] had confidence that we were doing the best we could," says the firm's chair, John Murphy.

Organizations have ample reason to seek reassurances that their business partners are doing enough to protect their data. In a recent PricewaterhouseCoopers survey, 61 percent of 1,322 global CEOs polled listed cyberattacks as a key threat to their organizations' growth prospects. That's up from 48 percent in 2014. Meanwhile, a study by the Ponemon Institute pegs the average total cost of a data breach at \$3.79 million. ▶▶





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►►► **A Case for Security** Continued from page 14

John Anderson, Shook's CIO, sought the ISO certification in 2013 at the urging of the firm's information governance committee. "We wanted a methodology and a framework that ensures we're using best practices for information security. And, secondly, we wanted third-party verification that proved our commitment to information security to external parties," Anderson says.

According to Anderson, Shook spent about \$30,000 in 2013 and another \$30,000 in 2014 on consultants and auditors to earn the certification; that's on top of additional cybersecurity-related spending to support the firm's security strategy.

Murphy says certification has strengthened Shook's position in the legal market. He says prospective legal clients ask the firms they're evaluating about their data security policies and procedures; some even specifically ask firms whether they have the ISO certification.

That's not surprising, Murphy says, considering that Shook clients let the firm have access to highly confidential, and often regulated, data. Those in the pharmaceutical industry, for example, share sensitive healthcare and drug discovery information.

Not a Panacea

However, Steve Wilson, an analyst at Constellation Research, cautions that businesses shouldn't view ISO 27001 as an iron-clad guarantee of great data security. "ISO 27001 is a management process standard—it doesn't tell you what to do exactly in security; it tells you how to go about managing the security function. It leaves all the heavy lifting to the enterprise," he says.

Wilson advises organizations to do in-depth evaluations of their business partners' cybersecurity standards to ensure they haven't taken a merely robotic approach to earning the ISO certification.

Nevertheless, Shook executives say the market does indeed see the ISO certification as an endorsement of the firm's cybersecurity measures. Anderson notes that, because the certification requires organizations to not only uphold specific standards but also continually review and improve their security postures, the certification demonstrates Shook's commitment to cybersecurity.

"When we do pitches to clients, it's something we mention, because it's a differentiator. It's a competitive advantage right now," Anderson says.

Mary K. Pratt is a freelance writer based in Massachusetts.

CTO Lets Sales Team Choose Ideal Tablets

BY JEN A. MILLER

When Wakefield Canada, the exclusive distributor of Castrol lubricants in Canada, set out to replace the tablets used by its sales team, it went right to the source to figure out what to buy: The people who would be using them in the field. "A big part of this was really involving our end users in the tool selection," says CTO Kent Mills.

The first question IT asked was what the salespeople didn't like about the devices they were using. "Feedback from the sales force was that tablets were nice but they were too slow to start up, heavy to lug around and they just weren't that convenient to use," says Mills.

The IT team narrowed the list of possible replacements to five candidates, including tablets from Hewlett-Packard, Samsung, Microsoft and Apple. In conjunction with the sales force, IT created a matrix of selection criteria, such as design, display, integration, performance, peripherals, support and security. Then each of the company's top five sales representatives was given a tablet to test. They swapped tablets at the end of every week until each of them had tested all five candidates.

"It wasn't even close," says Mills, reporting that Microsoft's Surface Pro 3 was the choice "by a very hefty margin." He admits that the Microsoft model wouldn't have been his first choice, but he's not the one who has to use it. After completing the scoring matrix, it was clear that the salespeople were choosing the best tool for them.

Selling the Change: A big benefit of the Surface Pro 3 is that, for people who travel, it can replace a laptop and also be used with a docking station in the office or at home. Moreover, Wakefield Canada's Surface Pro 3s will be tethered to smartphones, which means the tablets can always be connected.

Wakefield Canada employees use all kinds of tablets, including iPads. Mills says that people who have to stand up a lot may choose the iPad Air because it's light. But a tablet with laptop-like functionality may be right for salespeople.

Although the top sales reps chose the Surface Pro 3, the company still had to get the rest of the 50-person sales team on board. The company planned to distribute the Surface Pro 3s at a national sales meeting, so IT sent out teaser videos prior to the event. "By the time they got there, they'd seen all the videos and they were jazzed about it," says Mills. At the meeting, he says, IT touted the selection as "the best of both worlds because you can easily break it apart," referring to how the Surface Pro 3 can snap away from its stand to be used as a tablet.

Jen A. Miller is a freelance journalist who writes for CIO.com.



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DELOITTE ADVISORY PRINCIPAL,
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What challenges do companies encounter with a traditional approach to risk management?

Many organizations' risk management teams focus heavily on compliance. However, executives tend to focus most of their time, and rightly so, on enhancing ROI or shareholder value. For many organizations, there is a significant disconnect between the risk management function and the discussions in the executive boardroom. Yes compliance is a must, but we must also encourage risk management teams to think about strategic risk. We must consider how risk information within our organizations combines with market and competitive intelligence to drive greater returns via a specific and perpetual view of risk.

What is a "perpetual" view of risk?

Most organizations perform the plethora of risk data and activities in individual siloes. In my experience, by bringing this information together only via risk committees and reports, insights are rare and the value is limited. An effective risk management function should collect, compile, correlate and report on risk information from all relevant sources, based on a single repository with a comprehensive risk decision engine. The results make compliance more efficient and can enhance investment decisions. This view of risk management provides executives with insights for wise growth and on-going investment decisions, beyond just reporting on and managing known risks.

How can this transform risk management?

Having an end-to-end view of risk provides an opportunity to turn your risk management function from a pure cost center to one that provides value and insights to the executive team. Making this transformation requires a clear understanding of your organization's mission and strategy; industry-specific knowledge; a deep understanding of your critical

business processes; and a grasp of your risk tolerance. With a value-based view of risk management, enhanced investment decisions are possible.

How can risk be more effectively managed?

To better manage risks, they must be visible, current, correlated and understood. This can be achieved through a single repository, and the real value is in the analytics, queries and reports that this source can provide. Predictive analytics can help identify risks before they are upon you. At the other extreme, you can better manage your resilience and recovery capabilities against unknown or unforeseen events, whether they are physical — such as a fire, hurricane, earthquake or act of terror — or logistical events, such as a large-scale data breach or system failure. A repository, or enterprise risk management system (ERMS) brings together risk data existing on disparate systems, including information security, compliance, internal audit, third-party risks, procurement, human resources, etc. Combined with the best of internal thinking and market information, an ERMS solution can enable far more valuable conclusions about ongoing and future investment decisions.

What should companies look for in an ERMS solution?

With an ever-increasing culture of compliance requirements, new regulations and oversight, having an effective ERMS is a cost of doing business. You must ask yourself if you believe you can transform your view—and management—of risk within of your organization, including the data currently available. That answer is almost always yes; you can and should. Make the risk management function your best friend in determining and maintaining better investment decisions, rather than the group that you hope does its job and keeps the regulators away.

Global Collaboration Gains Speed

Milwaukee Tool designers in the U.S. and China get rapid-fire access to giant CAD files from a cloud-based application **BY MARY K. PRATT**

At Milwaukee Tool, the long, long waits to open large CAD files were making international collaboration between engineers in the U.S. and China inefficient—and threatening the company's goals for innovation, agility and speed.

Eric Hanson, the company's vice president of IT and business optimization, says engineers in China often had to wait multiple hours for the tool company's design files, typically about 2GB each, to open.

Because of the lag, engineers in China saved files locally so they could be opened quickly. But that meant their changes weren't visible to engineers in other locations, and vice versa, until files were later synced. Moreover, because engineers worked with local files, there was a chance that files might not have up-to-date information, which could lead to duplication of effort and incomplete product designs, Hanson says. That

scenario could, and occasionally did, create costly "scrap and rework" situations when product designs moved into production.

Milwaukee Tool's IT team sought to resolve the problem in 2014 as it prepared to launch a new custom application for the company's product development process. "We created this new software solution," Hanson says, adding that the question then became, "How do we infuse it with rapid-fire access?"

Milwaukee Tool selected Panzura's Global File System, a cloud storage service, for the job. Now, files take seconds to open rather than hours, because Panzura's technology ensures that only the latest version of a file is available, immediately, regardless of where a worker is based.

Many companies face the challenge of sharing large data files globally, says Scott Sinclair, an analyst at Enterprise Strategy Group. Cloud

technology alone won't solve the problem, because files stored in the cloud still reside on a physical server that may not be geographically close to all the workers who need access to them. But cloud-based applications such as Panzura's overcome the "proximity problem," Sinclair explains, by using distributed file-sharing technologies to ensure that data is stored close enough to the applications that require the data, while also ensuring that files have the latest revisions.

As a result, Sinclair says, users and IT departments have neither the lag time opening files nor the need to sync files that had been stored locally.

"It allowed us to fix that file access and speed problem," Hanson says. "We took this global team and, from a speed and efficiency standpoint, we put them in the same room virtually."

Mary K. Pratt is a freelance writer based in Massachusetts.

Data Center Group Tightens Cloud Certification Rules

The Uptime Institute is updating the way it certifies data centers to help cloud computing customers get the level of service they think they're paying for.

The Institute certifies data centers in different tiers according to their ability to remain operational during critical equipment failures. Data centers with backups for key parts of their electrical infrastructure can earn the highest ratings, Tier III and Tier IV.

The Institute offers two types of certificates: one for the design of a facility, which is awarded based on the blueprints alone, and another for its construction, which is awarded after the data center has been built and inspected.

A lot can change between the design and construction phases, and some companies that receive design certificates never go back and get their facilities certified after they've been built. But they still display the design certificate prominently in marketing materials. That can be misleading for customers shopping for data

center services, who often don't understand the difference.

"This practice is patently deceptive, since customers believe the facility has been constructed to meet certification criteria when in fact it hasn't," says Chris Crosby, CEO of data center construction firm Compass Datacenters, who's been pushing for changes to the certification system.

To address the problem, the Uptime Institute will no longer hand out the marketing foil that shows a data center has been design-certified, nor will it list those data centers on its website.

The change, which went into effect on July 1, applies only to data centers that sell commercial services and, for now, only to data centers in North America.

The change is a response to "increased scrutiny from industry groups, oversight mechanisms, and legal bodies in North America into the validity of Tier Certification of design documents in the commercial marketplace," the Institute says. *-James Niccolai*



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Doing Double Duty

CIOs find it exhilarating to take on business functions outside of IT. Yet these CIO-plus roles require a new mindset and trusted deputies.

BY JULIA KING

after stints as a CIO at three different companies, Elizabeth Hackenson was, well, a little bored. As CIO at The AES Corp., a \$17 billion global power company, she had surrounded herself with a formidable team and had no desire to micromanage them. She longed to “let go a little.”

In search of more and bigger challenges, Hackenson approached her CEO and listed the groups and responsibilities that interested her.

She got what she asked for and more. Today, as CIO and senior vice president of technology and services, Hackenson oversees IT, cybersecurity, corporate services, the internal audit group, the global insurance group and a new energy business that includes a rooftop solar company.

“A lot of what’s been moved under me is stuff where you need strong relationships rather than command and control. It’s more about influence,” Hackenson says.

An emphasis on relationships and relationship-building is a common theme for executives

with dual titles and so-called CIO-plus responsibilities. The primary reason is that IT increasingly permeates everything companies do. As technology is woven further into the overall business strategy, CIO roles—and titles—are expanding.

This expansion of duties has its benefits and practical challenges. IT already is tied to every single part of a business. As a result, technology executives have a keen horizontal perspective of all of a company’s business processes. From that unique perch, they can more readily identify business stumbling blocks and innovate process improvements that increase business value.

“The CIO is one of the few people in an organization who sees all the processes from cradle to grave and truly has an expansive point of view. That lends itself to leading other parts of the organization,” says Peter High, president of CIO advisory firm Metis Strategy and author of the book *Implementing World Class IT*.

A photograph of two people, a woman and a man, standing on a staircase. The woman, Elizabeth Hackenson, is on the left, wearing a black dress and a striped scarf. The man, Hugo Vasquez, is on the right, wearing a dark suit and a yellow tie. They are both smiling and looking towards the camera. The background is a light-colored wall with vertical wooden slats.

Elizabeth Hackenson, CIO and SVP of technology and services at AES, has taken on several non-IT functions, so she relies on her deputy CIO, **Hugo Vasquez**, to handle the bulk of IT responsibilities.

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MIKE PIECH
Vice President &
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Middleware

Red Hat, Inc.

Piech oversees the JBoss family of middle-ware products.

Red Hat pioneered open source solutions for the enterprise. Building on the successes of Red Hat Enterprise Linux, the company in 2006 acquired JBoss, an open source middleware company. Mike Piech recently discussed how a growing JBoss portfolio is helping enterprises leverage hybrid architectures.

Q: How does Red Hat's middleware help IT organizations become more agile and deliver new applications and services?

What we're constantly trying to attack is developer productivity. Specifically how fast developers can iterate, make changes, see the results of those changes, and then either move on or adjust. We strive to provide minimum complexity and just the right set of capabilities possible to get a job done.

Traditional, old-style, heavyweight middleware integrations are simply hard to work with and difficult to innovate with. Red Hat JBoss Middleware gives customers software that has been optimized by the open source community and supports the highest priority use cases. We follow the enterprise integration pattern framework included with Apache Camel, which is becoming a de facto standard for modular, agile integration solutions.

server. We've acquired other middleware technologies, including MetaMatrix for data virtualization, FuseSource, which implemented Apache Camel and Apache ActiveMQ, and Polymita for business process management. Combined with our own organic efforts and the open source projects we seeded or embraced, those flesh out a comprehensive portfolio layered on top of the application server foundation.

Q: How will Red Hat JBoss Middleware help IT integrate on-premise and cloud-based applications and data?

For a number of years, Red Hat's overall top-level technology vision has been open hybrid cloud. Part of what that is about is recognition that for a long time enterprises are going to have hybrid environments. We now have a lighter-weight mechanism and an approach to deploying software and components in the cloud that is enabling a rapid iterative development style.

Q: How does PaaS fit into your middleware strategy and how does that change the future of enterprises?

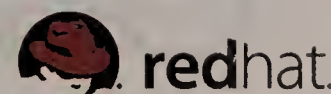
We've optimized middleware to run in traditional on-premise as well as cloud-based environments and in particular with Red Hat OpenShift Platform-as-a-Service (PaaS). Our xPaaS strategy is to offer JBoss middleware as services running on OpenShift to enable building and deploying complex, enterprise-scale applications. With xPaaS you are basically checking boxes and making selections and hitting deploy buttons in a web-based dashboard instead of the tedious and error-prone manual download, installation, and configuration of components in traditional environments. We see this xPaaS vision as the future of enterprise application development.

"REDHAT NOW HAS A LIGHTER-WEIGHT MECHANISM AND AN APPROACH TO DEPLOYING SOFTWARE AND COMPONENTS IN THE CLOUD THAT IS ENABLING A RAPID ITERATIVE DEVELOPMENT STYLE."

Q: What was the strategy behind the 2006 acquisition of JBoss and how has it evolved?

Red Enterprise Linux brought an open source operating system for the enterprise into the mainstream. We started looking where else to apply the open source model and it was logical to go to the next layer up the stack. JBoss was an open source implementation of the Java Platform Enterprise Edition (Java EE) set of standards with a Java EE application

For more
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It's also economically advantageous, especially for small and midsize companies. "Having people do two jobs and not paying them double seems like a good idea to a lot of organizations," High says.

Moreover, IT departments on the whole are shrinking, as companies increasingly turn to outside providers of software and services. This makes IT less labor-intensive to manage, freeing up CIOs to pursue other business and career interests.

Yet CIOs with dual titles and non-IT duties are not new. IT executives have been venturing beyond the traditional technology domain for at least a decade, playing key roles in activities such as performing due diligence before mergers and acquisitions, managing the supply chain, and developing new products and services.

But today, the challenges are both more numerous and more complex. CIOs with multiple titles and responsibilities need to juggle more priorities. The danger of getting spread too thin is very real. In fact, people in these diversified roles say one of their greatest challenges is to keep their focus on strategy and stay clear of the pull of day-to-day operations.

"That's been the biggest transition—to really, really let go," says Hackenson.

But at the same time, dual-role IT executives need to deeply immerse themselves in additional parts of the business where a whole new set of challenges lie in wait. Incumbent managers and staffers may resist the insertion of an outsider who didn't grow up in that business function. CIO-plus executives also need to adapt their management and leadership styles to their broader, non-IT constituency.

Not all CIOs are up to these challenges. "Only an executive who is ambitious takes this on," says High. "This is such a complex set of responsibilities. If they don't have a desire for additional responsibilities, or haven't been active enough to suggest that they could do it, it's not likely that [expanded titles and duties] will be suggested to a passive CIO."

AES's Hackenson agrees, saying she doubts that her CEO would have asked her to take on her other roles if she wanted to simply remain in the CIO's position.

The new energy solutions group she heads is a disruptive business in the 125-year-old, somewhat stodgy power industry. That's likely the main reason she was assigned to lead the group. "I had been in other industries like telecom that went through transformations," says Hackenson, a former CIO at Alcatel-Lucent and MCI Worldcom.

"What I do think is some CIOs are really great business people and management and boards are recognizing they can do more. But I think it's the CIO who makes the choice," she says.

CIO-Plus Titles: Through the Years

A sampling of CIOs with responsibilities beyond traditional IT

BRUCE GOODMAN

Chief Service and Information Officer, *Humana* (1999-2011)

DAVID JOHNS

CIO and SVP of Global Supply Chain, *Owens Corning* (2002-2009)

MARV ADAMS

CIO and SVP of Corporate Strategy, *Ford Motor Co.* (2005-2006)

SHELEEN QUISH

SVP of IT and HR, *Ameristar Casinos* (2007-2013)

SCOTT SULLIVAN

CIO and CFO, *Pitt Ohio* (2008-present)

THOMAS PECK

CIO and SVP of Global IT, Travel and Procurement, *AECOM* (2012-present)

JACK CLARE

Chief Information and Strategy Officer, *Dunkin' Brands* (March 2015-present)

1998 2000 2002 2004 2006 2008 2010 2012 2014 2016

Required: A Great Supporting Cast

Ironically, taking on greater responsibilities entails a good deal of letting go. There simply isn't time for CIO-plus executives to micromanage things like vendor management or the operational efficiency of the data center.

Hackenson estimates that now she spends only 10 percent of her time on IT, and she says she appointed a deputy CIO, Hugo Vasquez, to handle the bulk of those IT responsibilities.

"It doesn't feel good at first. Every time you move up the ladder, you have to let go, and yet you're letting go of things that got you to that position," Hackenson says.

Now, she adds, "I have very limited day-to-day activity in IT. Most days, I'm not even focused on it."

The only way to successfully do that is to surround yourself with an extraordinary, high-performing team, Hackenson says.

But with letting go comes watching people on your team make mistakes. "You learn to watch, but to focus more on what the person learned going through [the mistake]," she says. "I've become a lot calmer. In the past, I'd be upset by mistakes."

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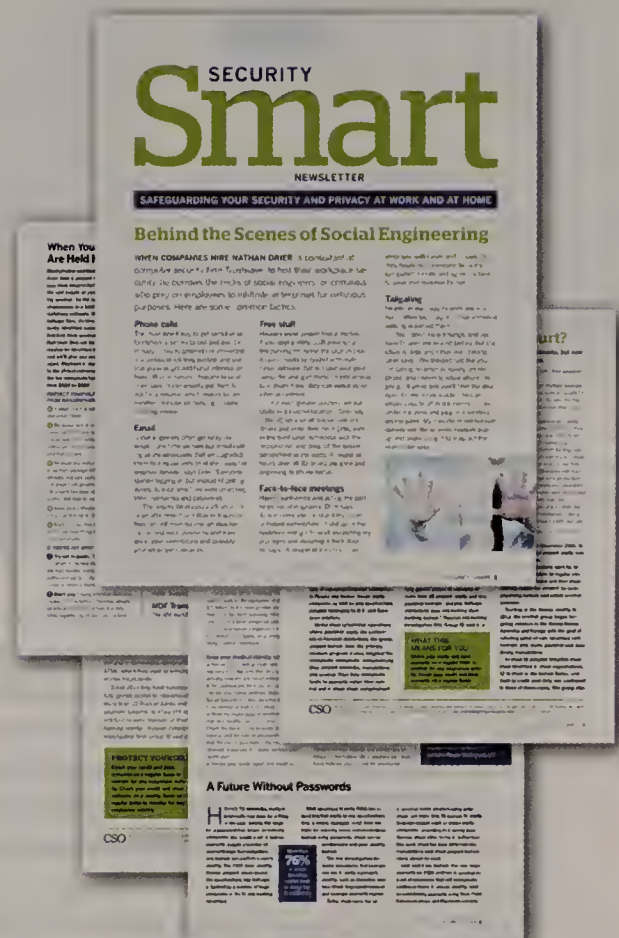
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CSO

Now I look at them as a growth opportunity, a learning. If I tell people what to do, they won't learn."

Hackenson has developed what she describes as a methodical process of asking questions of her direct reports, instead of micromanaging. This eventually leads team members to come up with the right answers themselves. "And when they come up with the answer, it's their idea. I can see their energy and they really take off with it," she says.

"Most CIOs like to heavy-lift," she says, "but once you get to this level with all of the other responsibilities, [it's more] about guiding, giving advice, coaching and mentoring. Mentoring is huge."

Praveen Chopra started that type of team-building process a little over a year ago, when he took on the role of chief information and transformative innovative environment officer at Thomas Jefferson University and Jefferson Health in Philadelphia.

He admits that it's a long and lofty title, especially for a former supply-chain manager who describes himself as an "accidental CIO."

"A few years back I was in supply chain at Home Depot and then moved to Children's Hospital of Atlanta as chief supply chain officer," Chopra recalls. "The CIO role came open. Other people at the hospital asked me to accept the CIO role, which I did. And I loved it. I really, really loved it."

Last year, during the process of interviewing for his current position at Jefferson, Chopra says he and Jefferson CEO Stephen Klasko had a "meeting of the minds."

"[Klasko] believed healthcare needed to change fundamentally," Chopra says. "And I believe the healthcare organization of the future will be the one that figures out how to leverage the power of the digital economy in a fundamentally different way."

Gaining such leverage was Chopra's overarching goal in completely overhauling Jefferson's IT organization. "I absolutely have to rely on building a very, very high-performance team," he says.

One of his first moves was to create a team of eight direct reports and several new titles, including vice president of innovation technology, and vice president of innovation and consumer experience. The goal, he says, is to think about technology innovation "ahead of the curve."

"We used to wait for something to come out, like iPads, and then go figure out how to support it," Chopra says. "Now, we want to know all of what's going on with healthcare and the Internet of Things and start experimenting and figuring out use cases. We have to experiment and try new things."

And while other companies have vice presidents of business applications, Chopra created a new title, vice president of business *partnering*, to focus attention not on the technologies, but on the people in the business units who use technology. "Business partnering is about how we use applications to do something. It's about accomplishing something with [software] applications.

It doesn't feel good at first. Every time you move up the ladder, you have to let go, and yet you're letting go of things that got you to that position.

—Elizabeth Hackenson, CIO and SVP of technology and services, The AES Corp.

These people think more like account managers," he explains.

Another new title at Jefferson is vice president of enterprise analytics and chief data scientist. "This role focuses on taking disparate data assets for student affairs, clinical trials, financial systems, quality systems and more, and creating an enterprise center for health information management that provides actionable insights," Chopra says.

Chopra says he didn't hire people for the vice president positions based primarily on technical expertise. Instead, he hired with an eye toward making every one of them a CIO someday.

"The way I hire people is unique. I hire them to be leaders first and functional experts second," he says. "I'm hiring a person who can be a future CIO. I'm looking at these people as future leaders."

Chopra meets with this team of eight once a week for two hours. At these gatherings, he says, "we spend less time on day-to-day business issues and more time on priorities, leadership, communication and engagement, and creating high-performance teams." The idea is to have his deputies lead their own groups without Chopra micromanaging them.

"I'm more about people, strategy and exception management," he explains. "It frees up my time for the executive cabinet, creating new business models, and [figuring out] how to create a degree program or certification for telehealth and other healthcare technologies."

Jefferson's telehealth initiative is one of the first tangible results of this leadership style, which encourages innovation and the move toward a patient-centric model. The hospital is investing about \$20 million to open multiple urgent-care centers and develop the telehealth program, called Jeff Connect, which includes video consultations so patients can receive care in their homes.

In late June, Jefferson began offering more than 17,000 employees and their families a mobile app they can use to schedule 15-minute video-based physician appointments,



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Elizabeth Hackenson, CIO and SVP of technology and services at AES, and her deputy CIO, **Hugo Vasquez**.

which, according to Chopra, are “secure and HIPAA-compliant.” While the app is currently just for Jefferson employees, he says “we plan to sell this product to customers like Bank of America and Comcast and others.”

Start With a ‘Beginner’s Mind’

as CIOs move into expanded roles, they find that adapting their leadership styles to effectively collaborate with the new array of professionals they encounter is a major challenge.

CIO-plus executives “need to make sure that they are humble enough,” says High, of Metis Strategy. “Even if they have been intricately involved in the new function, they need to approach their new set of responsibilities with humility. Everything that worked in IT won’t translate to HR or supply chain or other functions. It’s important to have a ‘beginner’s mind’ of sorts,” he says, referring to the mindset of people who are open to learning about new topics, without preconceptions.

Mike Capone, former CIO and head of product development at ADP, says managing diverse people was one of his great-

est challenges—and most rewarding lessons—at the financial services company.

“As you get out of more traditional IT and into product management, you have to manage differently. It stretched me a little bit,” says Capone, who is now COO at Medidata Solutions.

For example, he explains, “when you think about core IT, results are typically black and white. Was the system up and running? Did the project end on time?” But Capone says he has learned that you can’t apply that same thinking and management style to, say, a data science team. “They’d constantly remind me that this is a science and not about outcomes,” he recalls. “They had to remind me that they had to test data and experiment with it. It’s the same with user experience teams. They do a lot of experimentation and iterations. It changes the way you think about the world.”

Anne Ayer, CIO and vice president of corporate development at paper company Sappi North America, came to her CIO-plus role as an experienced business executive who was open to learning about technology.

“My background had really been on the strategy and corporate development side before joining Sappi,” Ayer says. “CIO was something the CEO asked me to take on. In my prior

experience working in consulting, I had some clients on the high-tech side and in my time at Sappi I had been involved in projects that had a strong IT component, but I'm definitely not a technologist by training or background."

So she redefined the technology side of her role to one of translator, she says.

"I spend a lot of time focusing on business value and helping the [IT] group articulate what the business opportunities are, whether they're working on a road map for applications, or infrastructure, or investment opportunities, or cybersecurity risks," Ayer says. "We want to make sure these things are articulated so the business can understand the cost, benefit and risk, and make the right decisions."

There's no such thing as a typical day, Ayer says. "The functions cycle differently. Corporate development can have peaks and valleys, depending on the deals and opportunities we're looking at. But IT does have an operational day-to-day management of an organization, the control framework and project portfolio and people," she says. "It is a lot of management-oriented stuff."

Like virtually every other CIO-plus, she says the only way to function effectively and avoid burnout is to rely on—and empower—her talented team. "There's a huge amount of delegating," she says. "We have people working at a very strong level of capability and accountability. It is a lot to juggle though."

'Major Career Boost' for Deputies

One of the greatest advantages of a dual title and an expanded set of responsibilities is the vast amount of experience and knowledge you can gain in such a position.

"Managing a more complex portfolio of activities is never a bad thing. You get to hone your skills," says Capone. "My role today has subsumed all the things I did in the past, plus marketing, professional services and all of the other things you think of as a COO."

It's also a major career boost for a CIO-plus exec's second-in-command and other direct reports.

"It's absolutely an opportunity for these people because the person with the dual title is grooming their successor," says High. Frequently, he says, the executive with the dual title goes on to a role that he describes as "beyond CIO," taking on a COO or even a CEO role.

"What this means is that it opens up one or multiple leadership positions for those under the incumbent," High points out.

One of the perennial issues CIOs wrestle with is recruiting and retaining the best and the brightest for their teams. It's here that CIOs with dual titles have one of their greatest advantages, says Scott Sullivan, CIO and CFO at Pitt Ohio, a privately held transportation and logistics company.

"No matter how hard you try, IT experiences a 20 to 30 percent turnover. You have to make sure you have the right team

As you get out of more **traditional IT** and into product management, you have to **manage differently.** It stretched me a little bit.

—Mike Capone, former CIO and head of product development, ADP

in place and the right people in key positions," Sullivan says.

"The good news is that in both IT and finance, the next level down has been pretty stable," he notes. He attributes the stability in part to his own dual role and the expanded responsibilities he has delegated to his direct reports.

"We have only lost two people who report directly to me. Part of the reason is they're challenged. They don't have time to go outside."

At AES, Hugo Vasquez says his role as deputy CIO gives him a global view of the corporation that he did not have in his previous positions as CIO of different business units, mainly in Latin America.

"Being in this [deputy CIO] position is providing me the opportunity to invest time in operations and at the same time connect at the executive level on global strategy," he says. "It's an excellent position to be well-connected and learning from corporate strategists and at the same time be close to clients and customers."

Vasquez also sees his current role as a steppingstone to the corporate CIO position.

"Being a deputy CIO gives me the opportunity to keep growing in the IT world, preparing for the CIO role. It gives me the confidence that whenever I get that position I'll be better prepared," he says. "I feel like AES is investing in me and preparing me for a future challenge."

Opportunities outside of IT also can become a bigger and more common part of career development in organizations with CIO-plus executives.

"I think before I took on the dual role, there had been exactly zero talent migration from IT to product development," says Capone of his tenure at ADP. "By the time I left, 50 to 75 people had crossed over."

As for the top tech position, Capone says, "without a doubt, the traditional CIO role eventually gets blended away as IT becomes more integral to everything going on. CIO is no longer a destination job." **CIO**

Julia King is a freelance writer based in Pennsylvania.

Mobility: From BYOD to Workplace Transformation



MICHAEL PARK
Vice President and
General Manager of
Hewlett-Packard's
Personal Systems
Group

Michael Park is Vice President and General Manager of Hewlett-Packard's Personal Systems Group. He is responsible for P&L growth of the company's global mobility portfolio, which spans devices, software, and services.

Q: What are IT departments doing right, and what can they do to improve the management of mobile information?

The mobility movement started with BYOD. Initially, it was a fast and unanticipated development that IT had to manage and secure very quickly. Now, there's been a fundamental shift in the ecosystem, with mobility extending beyond the office to employees downloading apps anywhere on multiple devices. IT needs to set policies for both BYOD and CYOD (Choose Your Own Device) to manage multiple devices and operating systems across the user base. The complexity is higher than it's ever been, and many IT departments have declining budgets, so it's a tough challenge.

"THE SYNERGY OF MICROSOFT AND HP WORKING TOGETHER WILL OFFER CUSTOMERS UNPRECEDENTED GAINS IN FLEXIBILITY AND SECURITY FOR MOBILE WORKLOADS. IT WILL ALSO LOWER THE TOTAL COST OF OWNERSHIP."



Q: We're somewhere between the "devices and a couple of apps" stage and a fully optimized mobility strategy for enterprises. What has to happen to get enterprises to the next level?

There's always an adoption curve for new technology. Enterprises need to envision their end goal, assess where they are, and build an incremental plan for moving forward. Many are still in the early stages, setting BYOD policies to give people email access on the road.

With Windows 10, Microsoft is making things easier for BYOD users. The synergy of Microsoft and HP working together will offer customers unpre-

cedented gains in flexibility and security for mobile workloads. It will also lower the total cost of ownership.

Q: Productivity is a well-recognized benefit of mobility. What are some other benefits?

I see three major benefits. The first is a new level of intimacy with customers. Second, mobility will drive cost savings and greater operational effectiveness by streamlining tasks for people working in the mobile environment. Third, it will give rise to a whole new level of innovations as businesses tailor their products and services for the mobile environment, be it at home or at work.

Q: Give us an example of workflow transformations that can happen with a solid mobility deployment.

Sure. Look at the way nurses work in a hospital today, pushing a giant cart holding a PC. They have to enter data manually, turning their back on the patient. We're changing the device to a tablet that's designed to operate in a primary care environment. It's anti-microbial and easier to carry, plus it has an IR reader that can scan the patient's bracelet to bring up records. The nurse gains up to three minutes of productivity per patient visit.

Q: Any final thoughts?

The need for constant connectivity, constant security, and constant authentication makes the mobile world quite complex. Fortunately, Microsoft and HP are here to help. Windows 10 will protect your company against modern security threats and end "wipe and replace" deployments with upgrades. It will help organizations be more productive by adapting to each user's habits.

Microsoft's "Mobile First, Cloud First" strategy provides a phenomenally strong value proposition. HP's strength is all the devices and services it can build to help drive a more cost-effective and agile support model. It's a dynamic combination, and I'm really excited about the value and productivity it will bring to CIOs.

 Windows 10



connect



SOUNDING BOARD

Innovation Injection

These CIOs tap into the startup ecosystem through tech incubators, advisory boards and word of mouth

PETER WEIS, MATSON NAVIGATION

FORMALIZE THE PROCESS

I don't respond to cold calls or emails from startups, and I don't expect to meet them at large conferences. Instead, I meet them through an informal CIO network that gets together regularly. We set an agenda and have a facilitator who finds a presenter—a representative from a company with a technology of interest who then has a roundtable discussion with us. I've come across an intrusion-detection system this way. I also participate on the advisory boards of funded startups—one is a videoconferencing company—and venture capitalists. The universities in the area are good sources of contacts, too.

We have systemized an innovation process with a team that is part of the IT department; it includes top performers and a newly hired director of innovation and ▶▶▶



Peter Weis,
VP and CIO,
Matson Navigation



Kelly McGowan,
CIO and
Senior Director
of IT Services,
American Securities



Adam Stanley,
CIO, DTZ



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architecture, whose job is to reach out to companies and assimilate innovative technologies. We brought in a suite of mobile technology tools this way.

A key for us is that the portfolio area within IT doesn't feel threatened. There is synergy between the groups, and we've made it clear this is a meritocracy—the top performers will get to work on projects that move the needle the most.

KELLY MCGOWAN, AMERICAN SECURITIES **EMPLOY SANITY CHECKS**

Word of mouth is a great way to learn about startups. I speak with other CIOs because they often have experienced the same issues, and we often share the same perspective. Another way is by tapping into people who follow specific industries. While large IT research firms don't typically have real startups on their radar, industry experts will individually follow small companies. I actually use Google quite a lot; other good sources of information on technology developments include the venture capital community, blogs, email lists, angel investors and websites like AngelList.

If we are interested in technology for one of our companies, we pressure-test the idea or product with some of our other portfolio companies that have faced similar real-world problems that the technology purportedly solved. The technology can't just be cool—it has to solve a problem. If our interest is more from a deployment perspective, we do a qualitative assessment at first. If we find a technology interesting, we'll spend time learning about the company. We have a due diligence process in which we meet the team from the company, learn the technology through demos and give the startup feedback from an enterprise perspective that it may not have received before.

ADAM STANLEY, DTZ **APPLY THE 'SHARK TANK' APPROACH**

One of the most effective ways I source innovation is through technology incubators. I am on the board of a Chicago incubator called 1871 and a mentor at both MetaProp NYC, a New York real estate incubator, and REach, an organization affiliated with the National Association of Realtors. Both provide good opportunities to meet people in the startup community, which in turn creates new connections for other kinds of engagement.

I also attend smaller conferences that attract a wealth of talent with interesting ideas. DisruptCRE, for example, gives innovative companies the opportunity to showcase their technology in *Shark Tank*-like panels where they have two minutes to make their pitches and answer questions from real estate decision-makers. DTZ is in discussions for a formal service agreement with a few of these startups as a result of one of these conferences.

We also replicate the *Shark Tank* format internally through virtual vendor fairs, where eight startups have five minutes to present to us. Members of my advisory council attend, as does our CEO. After our most recent event, we chose two of those vendors for further investigation. I also try to invite to our monthly leadership team meeting one startup that I've pre-qualified or that has been recommended. Like the *Shark Tank* TV show, these interactive sessions are a lot of fun.

TAKE Note

Refine Your Power

REGISTER The struggle to integrate work, life and family is an ongoing theme for women in the business world. To help brainstorm new ideas to address that issue, the CIO Executive Council's Women in Leadership community is hosting an Oct. 15 career lab called "Refine Your Power." Jodi Detjen and Kelly Watson, co-authors of *The Orange Line: A Woman's Guide to Integrating Career, Family and Life*, will facilitate this interactive session, held at the Center for Innovation and Change Leadership at Suffolk University in Boston. Join over 100 female leaders for a day of discussions and exercises to understand the career-limiting assumptions women make, reframe mental roadblocks, open up new possibilities and creatively solve problems. council.cio.com/refinecio

Governance Required

REGISTER Many businesses are interested in a digital transformation, but what exactly is it, and how do you go about it? In this virtual session, George Westerman, CEC Digital C-Suite Academic Advisor and principal research scientist at the MIT/Sloan Initiative on the Digital Economy, explores the need for business transformation in the digital economy, as well as the governance elements needed for success. He'll draw on the practical experience of Jeff Evans, who leads the CEC's Digital C-Suite Transformation Labs. council.cio.com/governdig

Moving to Microsoft 365

WATCH You might think that moving to cloud-based applications would be a no-brainer in terms of saving money and other resources and easing management headaches. However, that's not always the case, particularly when shifting from an on-premises Microsoft productivity suite like Office to Microsoft Office 365, where users are suddenly clients in the cloud. In this virtual session, organizations that have made the jump will discuss the deployment and support issues surrounding Microsoft Office 365 implementations. council.cio.com/msft365

Digitizing the Culture

BNY Mellon Investment Services uses IT to enhance the customer and employee experiences, according to CEO Brian Shea **BY MARTHA HELLER**

How is technology impacting your business?

We've always delivered core processing technology to support our clients' clearing, settlement and custody needs, but now we are extending technology across the entire investment process. We're about to deliver an open-source, cloud-based digital ecosystem called NEXEN, which

information and have conversations globally; it binds our company together and allows us to learn from each other more easily.

How are you using data?

We're pushing more information to our employees and managers through an analytics application we call MyDashboard. We put all the

new algorithmic tools that allowed them to optimize their collateral and improve their profitability. We're also using big data to share information about mutual fund flow and distribution analytics, which is very valuable to asset managers.

What role does your CIO play in data innovation?

Our business people know what information is meaningful to them, but not how to access that information across a complex set of applications. Our CIO, Suresh Kumar, understands what the businesses are looking for and delivers that information in a common and cost-effective way. Suresh is intellectually curious and stays current on technology and business model changes. He doesn't just respond to business requests; he comes up with transformative technology solutions that go well beyond what the business originally asked for.

What in the world of technology is particularly exciting to you?

We all have to figure out how to do more with less. Machine learning is particularly exciting to me because it means we can eliminate a lot of repetitive work that isn't exciting for people to do and doesn't add a lot of value to the business. Machine learning lets our talented people work on things that make a difference.

Martha Heller is president of executive recruiting firm Heller Search Associates and author of *The CIO Paradox*. Follow her on Twitter: @marthaheller.



delivers capabilities from all parts of BNY Mellon through a single gateway to our clients. The platform includes an API store that lets clients co-develop and integrate with us, using their own applications. It also allows us to integrate with third-party service providers, and reduces our clients' vendor management and integration costs by making the integration process turnkey.

How is technology improving the employee experience?

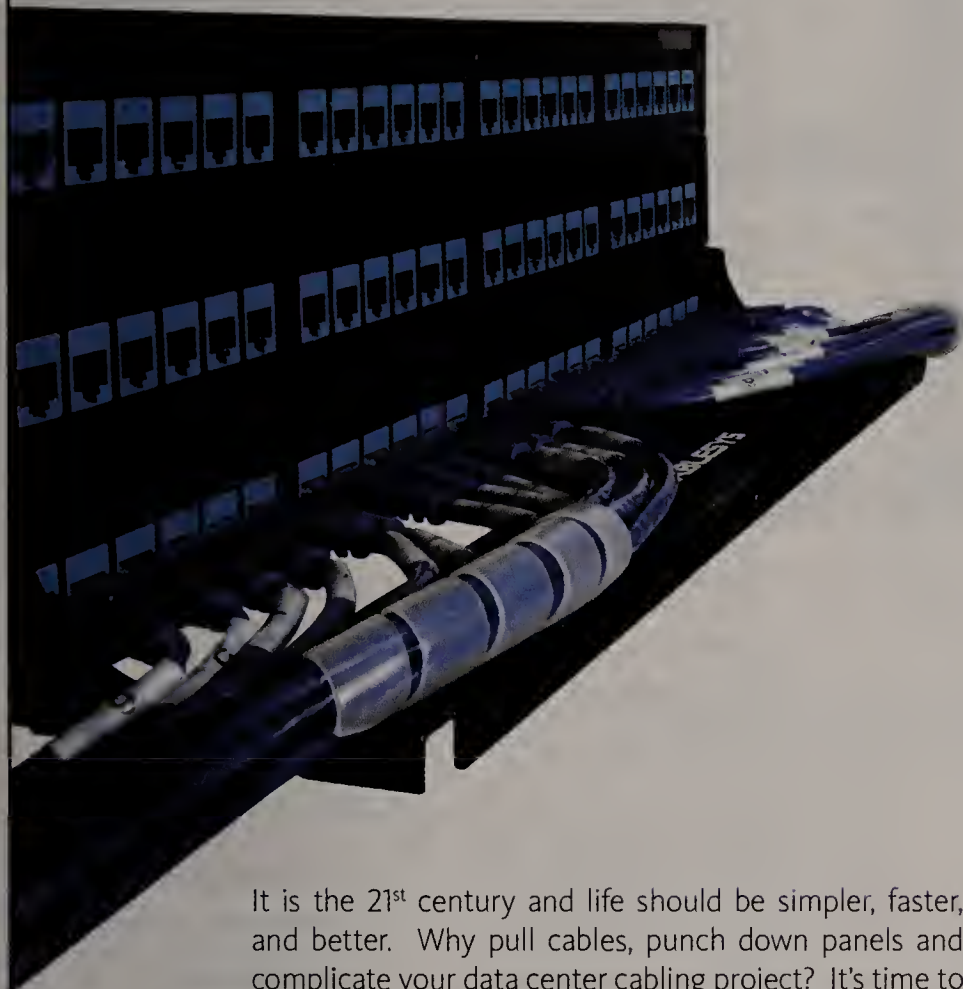
We recently launched MySource Social, an expansion of our intranet, which our employees use to create communities of interest and collaborate in a very different way. It allows people to solve problems, share

information a manager needs to be productive, whether that's employee performance management, expense management, or travel and entertainment approvals, into a comprehensive dashboard that's easy to access and understand.

We're always finding new ways to turn big data into advantage for our clients. In the wake of the financial crisis, tri-party repo-processing became a source of systemic risk, so we worked with regulators and industry participants to reduce that risk by re-engineering the technology that supports those processes.

We used that same technology to improve our clients' operating efficiency and reduce their cost per trade. We then provided them with

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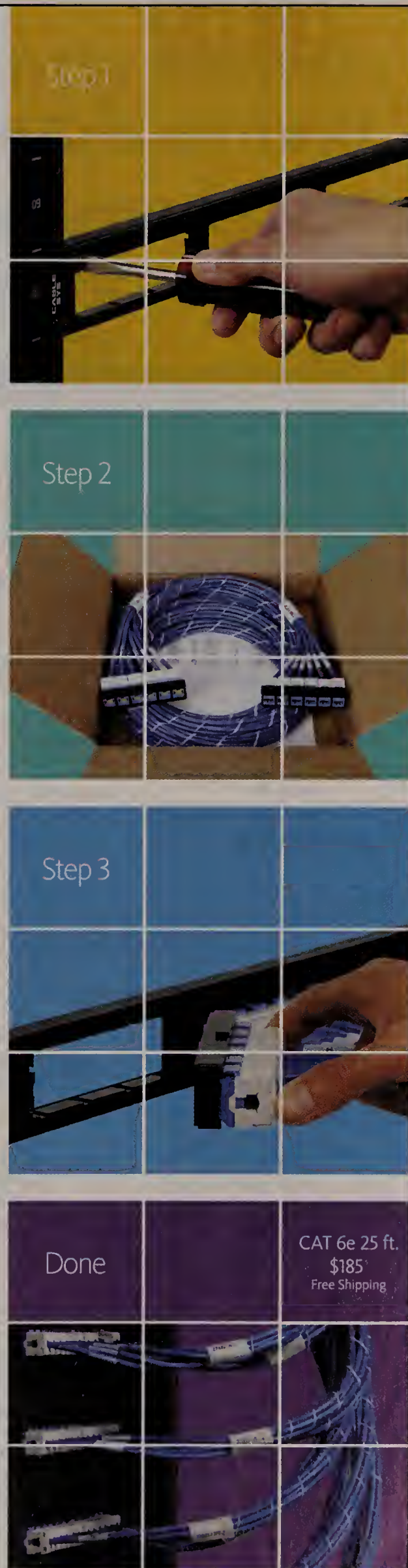
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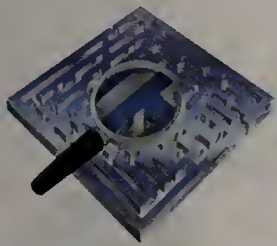
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finish

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Subsystem

People who dine at chain restaurants expect menus and food quality to be the same at every location. For Jersey Mike's Subs, the need for consistency extended beyond footlong sandwiches to the technology at each of its more than 1,500 locations. "We didn't want sporadic systems out there and we didn't want to have to build interfaces to convert data into one central database, so we set out to build our own," says CIO Scott Scherer. The Jersey Mike's IT team developed a single, proprietary point-of-sale system for all franchisees, regardless of their technology situation or aptitude. The system integrates sales, purchasing, customer service and loyalty data, allowing each restaurant to manage supply chain and operations efficiently. With all of that data in one system, users can pull reports on everything from sales to food costs and labor expenses. And having a uniform IT setup helps the company move faster when opening new stores or integrating new technologies like Apple Pay. Thanks to the POS tool, Jersey Mike's was able to open 155 new locations in 2014, improve customer satisfaction scores and decrease food and labor costs by 2 to 4 percent.

—Lauren Brousell

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